JAN - 3 2018



PLANNING BOARD GRAFTON, MA

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Subject:

January 3, 2018

Joseph Laydon

Grafton Municipal Center

30 Providence Road Grafton, MA 01519

Town Planner

Proposed Site Improvements

88 Worcester Street

Special Permit and Site Plan Review

Dear Joe:

We received the following documents on January 2, 2018:

- Correspondence from MHF Design Consultants, Inc. to Mr. Joseph Laydon, Town Planner, Town of Grafton Planning Department dated December 28, 2017, re: Proposed Site Improvements, 88 Worcester Street, Grafton, MA, Response to Graves Engineering Comments.
- Plans entitled Proposed Site Improvement Plans, 88 Worcester Street, Grafton, Massachusetts dated November 7, 2017 with Sheets 1 and 3 - 11 and the Truck Turn Plan last revised December 28, 2017, prepared by MHF Design Consultants, Inc. for Petrogas Group New England, Inc. (18 sheets)
- Bound document entitled Stormwater Management Report, Proposed Site Improvements, 88 Worcester Street, Grafton, Massachusetts dated November 7, 2017 and revised December 28, 2017, prepared by MHF Design Consultants, Inc. for Petrogas Group New England, Inc.

Graves Engineering, Inc. (GEI) has been requested to review and comment on the plans' and supporting documents conformance with applicable "Grafton Zoning By-Law" amended through May 8, 2017; Massachusetts Department of Environmental Protection (MassDEP) Stormwater Handbook and standard engineering practices. Our scope of work excluded review of the fuel storage and dispensing equipment and signage. As part of our initial review, GEI visited the site on November 21, 2017.

This letter is a follow-up to our previous review letter dated November 29, 2017. For clarity, the comments from our previous letter are italicized and our comments to the design engineer's responses are depicted in bold. Previous comment numbering has been maintained.

Our comments follow:

Zoning By-Law

A A S 1 L S A 1 E 段

1. In the project narrative included with the Special Permit and Site Plan Approval Applications, details about the hours of operation, maximum number of employees on the

largest shift, and frequency of shipping deliveries were not included. This information should be provided. (§1.3.3.3.c)

Acknowledged. The design engineer responded that as set forth in the "Statement in Support," the hours of operation will be 24 hours per day, seven days per week. The design engineer also responded that there will be up to three employees on the largest shift (although there will typically be two employees per shift) and that one to two deliveries per day are anticipated.

- 2. The plans must identify all properties within two hundred feet of the property. The property for Republic Plumbing Supply was not identified. The plans must include the approximate location of the buildings, driveways, and parking areas within two hundred feet of the property lines. The buildings within two hundred feet include but are not limited to Pepperoni Express, Republic Plumbing Supply, Unibank, Shell/Xtramart, the home at 1 Hitchings Road, Fitzy's Car Wash, and Homefield Credit Union. (§1.3.3.3.d.11)

 Acknowledged. A Locus Map (a new Sheet 2) with this information was added to the plan set.
- 3. The Table of Zoning Regulations on Sheet 4 (Site Plan) should state the actual percentage of existing and proposed building cover instead of "<30%". The percentage of pavement must also be included. (§1.3.3.3.d.15)

 Acknowledged. The Table of Zoning Regulations, now on Sheet 5, was revised. GEI concurs with the lot coverage areas presented in the table.

Hydrology & MassDEP Stormwater Management Review

- 4. GEI reviewed the hydrology computations and found them to be in order. No further comment necessary.
- 5. Compliance with the MassDEP Stormwater Standards and Handbook is reasonable. No further comment necessary.
- 6. In the Stormwater Report, the narrative for Standard #3 references an underground Stormtech arch chamber and stone infiltration system. This should be revised to reference the rain garden.

 Acknowledged. The narrative for Standard #3 was revised.

General Engineering

- 7. The eastern driveway entrance should be moved farther to the east, perhaps approximately ten feet, to reduce the potential for conflicts between vehicles entering the site and vehicles leaving the eastern-most fueling positions and making a right turning maneuver toward Worcester Street.
 - Acknowledged. GEI understands from a discussion with the design engineer and from the design engineer's response letter that this issue was discussed with the Planning Board and Conservation Commission, and that plan revisions to address this comment are not required.
- 8. On Sheet 2, there are unidentified lines (linetype consisting of a dash and three dots) north and west of the site. These lines need to be identified.

 Acknowledged. These lines were deleted from the plan sheet (now Sheet 3).

- On Sheet 5, there are overlapping and unreadable notes on the left side of the page regarding wetland boundaries and sewer piping. The notes should be moved so they are legible.
 - Acknowledged. The note locations were revised (now on Sheet 6).
- 10. On Sheets 5 and 6, there is an unidentified dashed line running through the road just below the "Worcester Street" text. This line should be identified or removed. Acknowledged. The line (now on Sheets 6 and 7) is a topographic contour and was labeled as such.
- 11. On Sheet 7, the "Schematic Rain Garden Area Detail" shows a bottom elevation of 508 feet on the diagram. This elevation needs to be revised to be consistent with the table of information also presented in this construction detail.

 Acknowledged. The rain garden was replaced with an infiltration basin and the rain garden construction detail was superseded by an infiltration basin construction detail; this comment is no longer applicable.
- 12. On Sheet 7, the "Overflow Weir Details" calls out "6 inches of crushed gravel base course" but does not specify the gravel size.

 Acknowledged. A standard MassDOT gravel specification label was added to the construction detail (now on Sheet 10).
- 13. On Sheet 8, the "Light Fixture Detail" shows a pole height of 20 feet with 2.5 feet of base exposed. On Sheet 12 (Lighting Plan), the pole height is 15 feet on a two-foot base. The information needs to be consistent.
 Acknowledged. The "Light Fixture Detail" (now on Sheet 9) was revised to be consistent with the Lighting Plan.
- 14. On Sheet 9, the "Trench Section for Storm Drain" construction detail is shown twice. One of these details could be removed.
 Acknowledged. The plan sheet (now Sheet 10) was revised.
- On Sheet 9, Note 2 of the "Outlet Protection Flat Detail" is incomplete and should be revised.
 Acknowledged. Note 2 (now on Sheet 10) was revised.
- 16. GEI performed a cursory review of the Traffic Impact and Access Study, with emphasis on crash rates, sight distances and traffic generation. The Study appeared to be in order. The Study found crash rates below State and District 3 rates, adequate sight distances and proposed traffic generation that would be less than traffic generation if the former fueling and service station use were resumed. The major factors that influenced the traffic generation rates were the number of fueling positions (eight existing and eight proposed), the trip generation rates (the proposed use is only slightly less than the existing use if the existing use were resumed) and the percent of pass-by trips (the number of pass-by trips would increase, thereby reducing the number of trips destined specifically to the site). GEI has no reason to dispute the Study's findings.

GEI understands that the Planning Board retained a traffic peer reviewer. GEI defers traffic review issues, if any, to the Planning Board and its traffic peer reviewer.

General Comments

17. GEI has not reviewed the plans with respect to the fuel storage and dispensing system. We understand that the Grafton Fire Department will review the proposed fuel storage and dispensing design.

No further comment necessary.

- 18. GEI has not reviewed the plans with respect to signage. We understand that the Grafton Planning Board will review the proposed signage.

 No further comment necessary.
- 19. GEI did not review the application with respect to regulations administered by the Grafton Conservation Commission. Whereas the site is located within areas jurisdictional to the Commission, the design engineer should be aware of the existence of local wetland and stormwater regulations.

 Acknowledged. GEI reviewed the application materials for conformance with the "Regulations for the Administration of the Wetlands Bylaw" on behalf of the Conservation Commission and issued a letter dated December 13, 2017. Relative

"Regulations for the Administration of the Wetlands Bylaw" on behalf of the Conservation Commission and issued a letter dated December 13, 2017. Relative to our December 13, 2017 letter, GEI had no comments that required revisions to the plans or supporting documents.

Additional Comments, January 3, 2017

- 20. The plans were revised to include a new drain manhole, DMH 3, with an emergency shutoff valve. DMH 3 is located at the inlet to the infiltration basin and the proposed valve would allow for easy operation from outside the manhole. GEI agrees with the concept of an emergency shut-off valve, however we are concerned whether the valve seals (identified as Sarlink on Sheet 10 of the plans) are compatible with gasoline and whether the valve could serve its intended purpose once exposed to liquid gasoline. Based upon our research, Sarlink is not compatible with gasoline. The design engineer should consider an alternative valve or needs to address the proposed valve's chemical compatibility, periodic valve seal inspection and seal replacement if an inspection warrants such a replacement.
- 21. The Stormwater Report was revised to recognize Axtell Brook as a Cold-water Fishery and to demonstrate compliance with Standard #6 (Stormwater discharges to critical areas). GEI reviewed the information and found it to be in order.

We trust this letter addresses your review requirements. Feel free to contact this office if you have any questions or comments.

Very truly yours,

Graves Engineering, Inc.

Jeffrey M. Walsh, P.E.

Vice President

cc: Joshua Lee Smith, Esq.; Bowditch and Dewey

Huseyin Sevincgil, P.E.; MHF Design Consultants, Inc.

Grafton Conservation Commission